WHAT IS CLAIMED IS:

1.   An apparatus for measuring a specific absorption rate (SAR) of a radio communication apparatus, comprising:

a first measurement device for measuring in free space a first near magnetic field distribution of a radio wave radiated from an array antenna of a reference antenna including a plurality of minute antennas;

a second measurement device for measuring a specific absorption rate (SAR) distribution with respect to the radio wave radiated from said array antenna, with a predetermined phantom using a predetermined measuring method;

a first calculation device for calculating a distribution of a transformation coefficient α by dividing said measured specific absorption rate (SAR) distribution by a square of said measured first near magnetic field distribution;

a third measurement device for measuring in free space a second near magnetic field distribution of a radio wave radiated from a radio communication apparatus to be measured; and

a second calculation device for estimating and calculating a specific absorption rate (SAR) distribution with respect to the radio wave radiated from said radio communication apparatus to be measured, by multiplying a square of said measured second near magnetic field distribution by said calculated distribution of the transformation coefficient α.

2.   The apparatus as claimed in claim 1, wherein said minute antennas are minute dipole antennas.

3.   The apparatus as claimed in claim 1, wherein said array antenna is formed by arranging a plurality of

minute antennas in a one-dimensional array on a plane along a shape of a side surface of a head of a human body.

4. The apparatus as claimed in claim 1,

wherein said array antenna is formed by arranging a plurality of minute antennas in a two-dimensional array on a plane along a shape of a side surface of a head of a human body.

5. The apparatus as claimed in claim 1,

wherein said array antenna is formed by arranging a plurality of minute antennas at an equal antenna interval "d".

6. The apparatus as claimed in claim 5,

wherein the plurality of minute antennas are arranged in said array antenna so that the antenna interval "d" satisfies $d \le 1.1\ h$ when a measurement interval between said array antenna and said first measurement device is "h".

7. The apparatus as claimed in claim 5,

wherein the plurality of minute antennas are arranged in said array antenna so that the antenna interval "d" satisfies $d \le 1.3\ h$ when a measurement interval between said array antenna and said first measurement device is "h".

8. The apparatus as claimed in claim 1,

wherein said array antenna is arranged so that main beams from the plurality of minute antennas are parallel to each other.

9. The apparatus as claimed in claim 1,

wherein said array antenna is arranged so that main beams from the minute antennas adjacent to each other among the plurality of minute antennas are orthogonal to each other.

10. An apparatus for measuring a specific absorption rate (SAR)

of a radio communication apparatus, comprising:

a first measurement device for measuring in free space a first near magnetic field distribution of a radio wave radiated from a flat-plane-shaped dipole antenna of a reference antenna;

5   a second measurement device for measuring a specific absorption rate (SAR) distribution with respect to the radio wave radiated from said flat-plane-shaped dipole antenna, with a predetermined phantom using a predetermined measuring method;

a first calculation device for calculating a distribution of a
10   transformation coefficient α by dividing said measured specific absorption rate (SAR) distribution by a square of said measured first near magnetic field distribution;

a third measurement device for measuring in free space a second near magnetic field distribution of a radio wave radiated from a radio
15   communication apparatus to be measured; and

a second calculation device for estimating and calculating a specific absorption rate (SAR) distribution with respect to the radio wave radiated from said radio communication apparatus to be measured, by multiplying a square of said measured second near magnetic field
20   distribution by said calculated distribution of the transformation coefficient α.

11.   The apparatus as claimed in claim 10,

wherein said flat-plane-shaped dipole antenna comprises two rectangular radiation conductors having sizes different from each other
25   to be formed so that a feeding point is excluded from a range of a near magnetic field measurement.

12.   The apparatus as claimed in claim 11, further comprising an

impedance matching circuit connected with said flat-plane-shaped dipole antenna, said impedance matching circuit making an impedance matching between a feeding line and the flat-plane-shaped dipole antenna.